

ABSTRACT OF THE DISCLOSURE

Sub 977 A power semiconductor device having a low on-resistance and
a high breakdown ruggedness is disclosed. Trench regions
5 formed so as to contact trench gates via gate-insulating
films are connected by emitter regions so as to form a
ladder-like configuration. The emitter regions are formed
at a less depth than the trench regions. Therefore, the
resistance in portions of the body that are near the
10 interfaces with the emitter regions is reduced, and the
operation of parasitic transistors formed by the emitter
regions, the body, and an epitaxial layer is substantially
prevented. As a result, the on-resistance is varied, and
the avalanche ruggedness and the latch-up ruggedness are
15 improved.

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